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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (original) A method of homogenising polypropylene comprising melting the polypropylene and subjecting it to sufficient elongation stress to cause a significant elongational strain sufficient to break up gels within the polypropylene.

2. (original) A method of homogenizing a polymer comprising the steps of determining the strain-hardening region of the polymer, melting and mixing the polymer, wherein the polymer is subjected to sufficient elongational stress during mixing to cause a significant strain-hardening whereby to break up gels within the polymer.

3. (currently amended) A method as claimed in claim 1~~ or 2~~, wherein the rate of deformation applied is of at least ten times greater magnitude than that applied in the conventional counter-rotating extruders commonly used for high- density polyethylene.

4. (currently amended) A method as claimed in claim 1,~~2 or 3,~~ wherein the average effective elongational deformation (Hencky strain) and elongational stress applied to the polymer is increased by at least 20% compared with the conventional counter-rotating extruders commonly used for high density polyethylene.

5. (original) A method as claimed in claim 4, wherein the average effective elongational deformation (Hencky strain) and elongational stress applied to the polymer is increased by at least 50% compared with the conventional counter- rotating extruders commonly used for high density polyethylene.

6. (currently amended) A method as claimed in ~~any preceding~~ claim 1, wherein all polymers or modes of polymer forming the material being processed are worked in their strain-hardening region.

7. (currently amended) A method as claimed in ~~any preceding~~ claim 1, wherein the elongational stress applied is sufficient to cause a Hencky strain of between 1.5 and 2.5.

8. (original) A method as claimed claim 7, wherein the elongational stress applied is sufficient to cause a Hencky strain of between 1.8 and 2.2.

9. (currently amended) A method as claimed in ~~any preceding~~ claim 1, wherein the polymer thereby produced has no visible white spots when tested as described herein.

10. (currently amended) A method as claimed in ~~any preceding~~ claim 1, wherein the polymer contains a high molecular weight fraction having a molecular weight greater than 350,000.

11. (currently amended) A method as claimed in ~~any preceding~~ claim 1, wherein the method is carried out using a counter-rotating device.

12. (currently amended) A method as claimed in ~~any preceding~~ claim 1, wherein the polymer reaches a temperature of at least 5°C above the melting point of the polymer before reaching the mixing stage.

13. (original) An apparatus for homogenising polypropylene comprising a melting section for melting the polypropylene and a mixing section wherein the polypropylene is subjected to sufficient elongation stress to cause a significant elongational strain sufficient to break up gels within the polypropylene.

14. (original) An apparatus for homogenizing multimodal polypropylene, wherein the apparatus is capable of creating sufficient elongational strain within the polypropylene that polypropylene containing a high molecular weight fraction having a weight average molecular weight of over 500,000 may be homogenized to produce a product with no visible gels.

15. (original) An apparatus for homogenizing multimodal polypropylene comprising twin counter-rotating screws located within a housing which serve to melt and mix polymer and feed it to a downstream forming device, the apparatus comprising a melting stage and a separate downstream mixing stage, wherein the melting stages raises the temperature of the polypropylene to a temperature above its melting point before it reaches the mixing stage.

16. (original) An apparatus for homogenizing multimodal polypropylene comprising twin counter-rotating screws located within a housing which serve to melt and mix polymer and feed it to a downstream forming device, wherein the apparatus comprises a melting stage which raises the temperature of the polypropylene to a temperature above its melting point, a mixing stage in which sufficient elongational stress is applied to cause significant strain hardening in the polypropylene and a forming stage, the stages being separated from each other along the length of the screws.

17. (original) An apparatus as claimed in claim 16, further comprising a gate valve between the melting section and the mixing section.

18. (currently amended) An apparatus as claimed in claim 16 ~~or 17~~, wherein a distinct feeding section is provided upstream of the melting section.

19. (original) An apparatus as claimed in claim 16, further comprising a pre-melting stage upstream of the apparatus defined in that claim.

20. (canceled)

21. (currently amended) A method of producing homogenised multimodal polymer comprising the use of the method or apparatus of ~~any preceding~~ claim 1.